



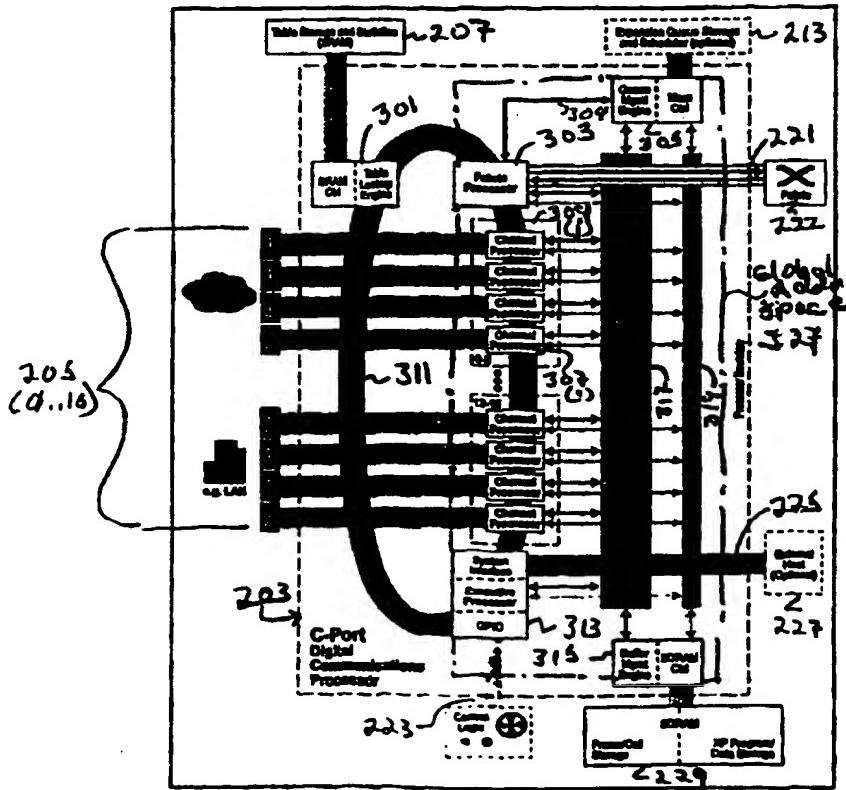
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> :	A1	(11) International Publication Number: <b>WO 99/59078</b>
<b>G06F 15/16</b>		(43) International Publication Date: 18 November 1999 (18.11.99)
(21) International Application Number:	PCT/US99/10002	SCHMITT, Paul [US/US]; 26 Whitaker Lane, Princeton, MA 01541 (US).
(22) International Filing Date:	7 May 1999 (07.05.99)	(74) Agent: NELSON, Gordon, E.; 57 Central Street, P.O. Box 782, Rowley, MA 01969 (US).
(30) Priority Data:		(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HR, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
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(54) Title: DIGITAL COMMUNICATIONS PROCESSOR

## (57) Abstract

An integrated circuit (203) for use in processing streams of data generally and streams of packets in particular. The integrated circuit (203) includes a number of packet processors (307, 313, 303), a table look up engine (301), a queue management engine (305) and a buffer management engine (315). The packet processors (307, 313, 303) include a receive processor (421), a transmit processor (427) and a risc core processor (401), all of which are programmable. The receive processor (421) and the core processor (401) cooperate to receive and route packets being received and the core processor (401) and the transmit processor (427) cooperate to transmit packets. Routing is done by using information from the table look up engine (301) to determine a queue (215) in the queue management engine (305) which is to receive a descriptor (217) describing the received packet's payload.



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